

Appl. No. 10/771,992  
Paper dated January 19, 2007  
Reply to Office Action dated September 25, 2006

**Amendments to the Drawings:**

The attached two (2) sheet(s) of drawings reflect changes to Figure(s) 6 and replace the original sheet(s) of these Figure(s).

**Attachments:** One (1) Replacement Sheet(s)  
One (1) Annotated Sheet(s) Showing Changes

**REMARKS**

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Status of the Claims and Explanation of Amendments

By this paper the abstract is amended. This amendment is believed to resolve the objection of the September 25, 2006, Office Action at page 3. Applicant notes, however, that the abstract has been amended to enable the United States Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure and to aid indexing, classifying and searching. 37 C.F.R. § 1.72(b); MPEP § 606.01. The amendment is *not* intended to narrow, limit, alter or otherwise characterize what Applicant regards as the invention. It is, of course, the claims and not the abstract that defines the invention being claimed.

The specification and Figure 6 also are amended. These amendments are believed to fully resolve the objections of the September 25, 2006, Office Action to the specification and drawings at pages 3-4. Withdrawal of those objections is requested.

Claims 1-17 were pending. By Restriction Requirement dated June 15, 2006, claim 17 was withdrawn from substantive consideration. By this paper, claims 1, 6-7, 9 and 14 are amended, and claim 11 is canceled without prejudice or disclaimer.

Claim 1 is amended to delete “said” and amended to recite “a” in line 9. Claim 14 is similarly amended.<sup>1</sup> Claim 7 is amended to delete “first” in line 3. Claim 9 is amended to

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<sup>1</sup> The office action states that claim 14, as originally filed, recites “said partitioning member” in line 11. [9/25/2006 Office Action at p. 5]. For the purposes of this response, Applicant has treated this as an intended reference to “said position sensor” recited in claim 14, line 3. If something else was intended, Applicant respectfully requests appropriate clarification.

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delete “is” and amended to recite “comprises.” Support for the amendment to claim 9 may be found throughout the application as originally filed, including for example on page 42, line 6, to page 44, line 26, of the specification. These amendments to the claims were not made for any substantial reasons related to patentability (§§ 102, 103).

Claim 6 is amended to recite “wherein said correction member is located at a position that generates sensitivity similar to the optical change, and said correction member corrects at least one of coma and spherical aberration.” Support for the amendment to claim 6 may be found throughout the application as originally filed, including for example on page 27, line 8, to page 28, line 11.

No new matter will be added to this application by entry of these amendments.

As to matters of form, the September 25, 2006, Office Action rejected claims 1-5, 7 and 14-16 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. [9/25/2006 Office Action at pp 4-6]. The amendments set forth above to the specification and the claims are believed to render this rejection moot. Pending claims 1-5, 7 and 14-16 are believed to define with reasonable clarity the patentable subject matter and would readily be understood by a person of ordinary skill in the art. Applicant respectfully requests withdrawal of the rejection of the claims under § 112, second paragraph.

As to the merits, claims 6-13 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. US2002/0080338 A1 to Taniguchi (“Taniguchi”). [9/25/2006 Office Action at p. 6]. The rejection to claim 11 is respectfully asserted to be moot in light of its cancellation. Claims 1-5 and 14-16 were not rejected on the merits, and are believed to be condition for allowance.

B. Claims 6-13 are Patentably Distinct from Taniguchi

The rejections of claims 6-13 are respectfully traversed. As explained more fully below, the requirements for such rejections are not met.

Applicant's claim 6 recites:

6. A position detecting apparatus that uses light to detect a position of an object, said position detecting apparatus comprising:
  - an optical element disposed on a partitioning member for partitioning two spaces having different pressures; and
  - a correction member for correcting an optical change caused by a deformation of said optical element,

wherein said correction member is located at a position that generates sensitivity similar to the optical change, and said correction member corrects at least one of coma and spherical aberration.

The office action takes the position that "in view of Taniguchi's teachings, it would have been obvious to one of ordinary skill in the art . . . to position the correction member at a location that generates sensitivity similar to the optical change . . ." [9/25/2006 Office Action at pp. 7-8]. However, the office action does not cite any portion of Taniguchi which mentions any sensitivity generated by the correction member.

Taniguchi is directed to a projection exposure apparatus for scanning a pattern of a reticle onto a wafer by a scanning exposure method. [Taniguchi, ¶ 0002]. To correct distortion caused by changes in atmospheric pressure, a distortion corrector is used. [Taniguchi, ¶¶ 0039 & 0065].

Taniguchi discloses a distortion corrector which comprises a pair of optical wedges:

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The distortion corrector 31 comprises an optical wedge 12 which is closer to the reticle R, and an optical wedge 13 which is disposed to underlie the optical wedge 12. The optical wedges 12 and 13 are wedge-shaped flat glasses of approximately the same size. . . . The arrangement of the distortion corrector 31 is advantageous in that it does not require very stringent tolerance requirements for the distance between the distortion corrector 31 and the reticle R and for the distance between the distortion corrector 31 and the optical projection system PL.[Taniguchi, ¶ 0050].

Regarding the disposition of the optical wedges 12 and 13 . . . it is preferable to dispose the optical wedges 12 and 13 near the reticle R in order to minimize the influence on aberrations other than distortion. [Taniguchi, ¶ 0052].

Absent from Taniguchi's disclosure of its distortion correction is any mention of a sensitivity generated by the distortion corrector. Therefore, Taniguchi does not teach, disclose or suggests "a correction member located at a position that generates sensitivity similar to the optical change" as recited in Applicant's amended claim 6.

Accordingly, as Applicant cannot find the correction member of amended claim 6 in Taniguchi, at least independent claim 6, and its dependent claims 7-13 are respectfully asserted to be in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections under § 103(a).

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited document from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Likewise, Applicant has chosen not to swear behind Taniguchi, cited by the office action, or to otherwise submit evidence to traverse the rejection at this time. Applicant, however, reserves the right, as provided by 37 C.F.R. §§ 1.131 and 1.132, to do so in the future as appropriate. Finally, Applicant has not specifically addressed the rejections of the dependent

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claims. Applicant respectfully submits that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

### CONCLUSION

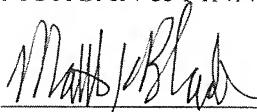
For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5274.

Dated: January 19, 2007

By:

Respectfully submitted,  
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